

Appendix F for BT LE Test Data

Product Name: Bluetooth Earphones

Test Model: TA1

Environmental Conditions

Temperature:	24.8 ° C
Relative Humidity:	53.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond Lu
Supervised by:	Li Huan

F.1 RF Output Power

Test Result

BT LE

Test Condition	TestMode	Antenna	Channel	EIRP[dBm]	Limit[dBm]	Verdict
NVNT	BLE_BT5.0	Ant1	2402	3.96	20	PASS
			2440	5.72	20	PASS
			2480	5.39	20	PASS

Test Condition	TestMode	Antenna	Channel	EIRP[dBm]	Limit[dBm]	Verdict
NVLT	BLE_BT5.0	Ant1	2402	3.89	20	PASS
			2440	5.65	20	PASS
			2480	5.20	20	PASS

Test Condition	TestMode	Antenna	Channel	EIRP[dBm]	Limit[dBm]	Verdict
NVHT	BLE_BT5.0	Ant1	2402	3.83	20	PASS
			2440	5.59	20	PASS
			2480	5.01	20	PASS

***Note: 20 bursts had been captured for power measurement.

BT 2LE

Test Condition	TestMode	Antenna	Channel	EIRP[dBm]	Limit[dBm]	Verdict
NVNT	BLE_BT5.0	Ant1	2402	3.90	20	PASS
			2440	5.62	20	PASS
			2480	5.27	20	PASS

Test Condition	TestMode	Antenna	Channel	EIRP[dBm]	Limit[dBm]	Verdict
NVLT	BLE_BT5.0	Ant1	2402	3.74	20	PASS
			2440	5.56	20	PASS
			2480	5.22	20	PASS

Test Condition	TestMode	Antenna	Channel	EIRP[dBm]	Limit[dBm]	Verdict
NVHT	BLE_BT5.0	Ant1	2402	3.71	20	PASS
			2440	5.43	20	PASS
			2480	5.08	20	PASS

***Note: 20 bursts had been captured for power measurement.

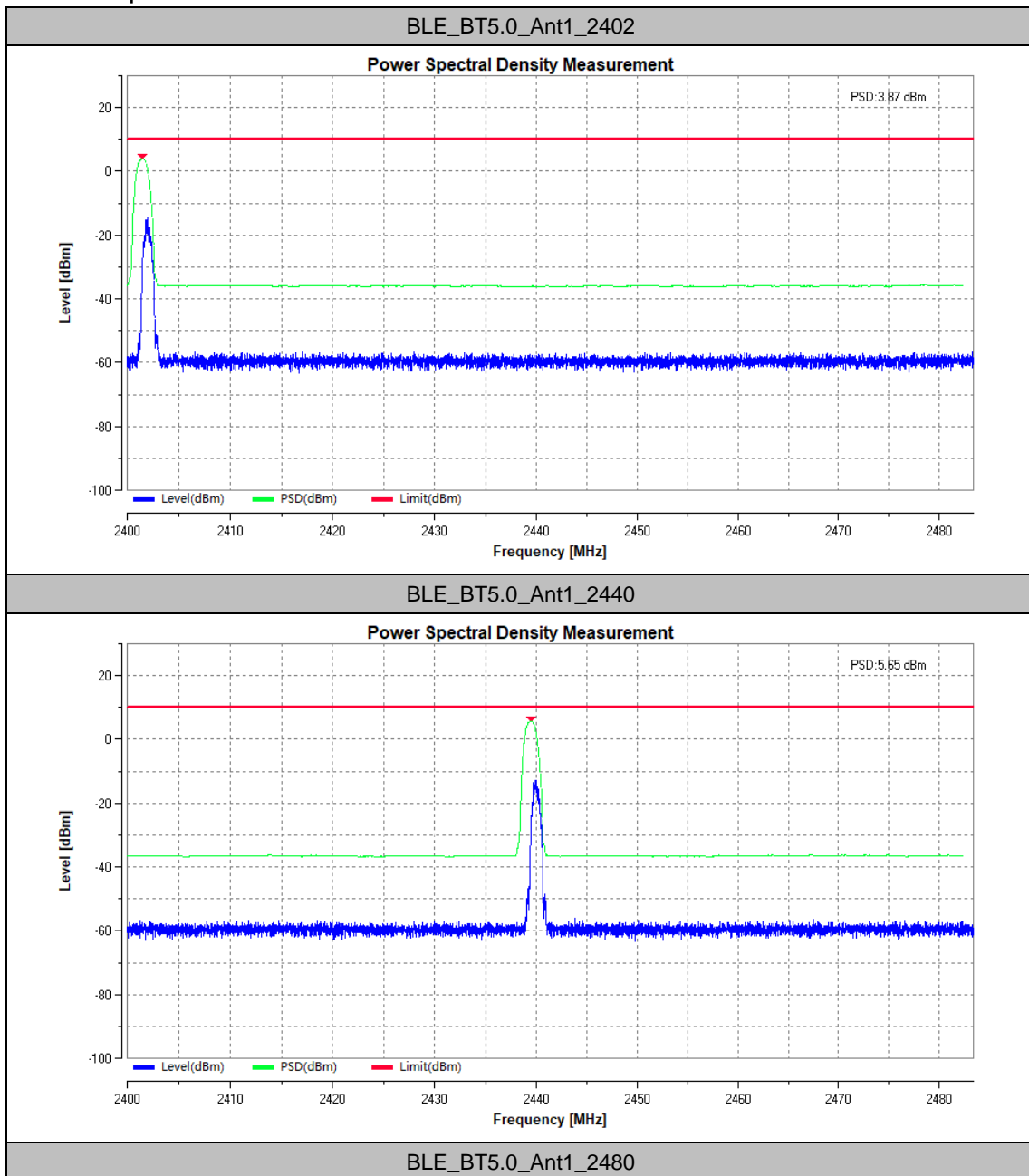
F.2 Power Spectral Density

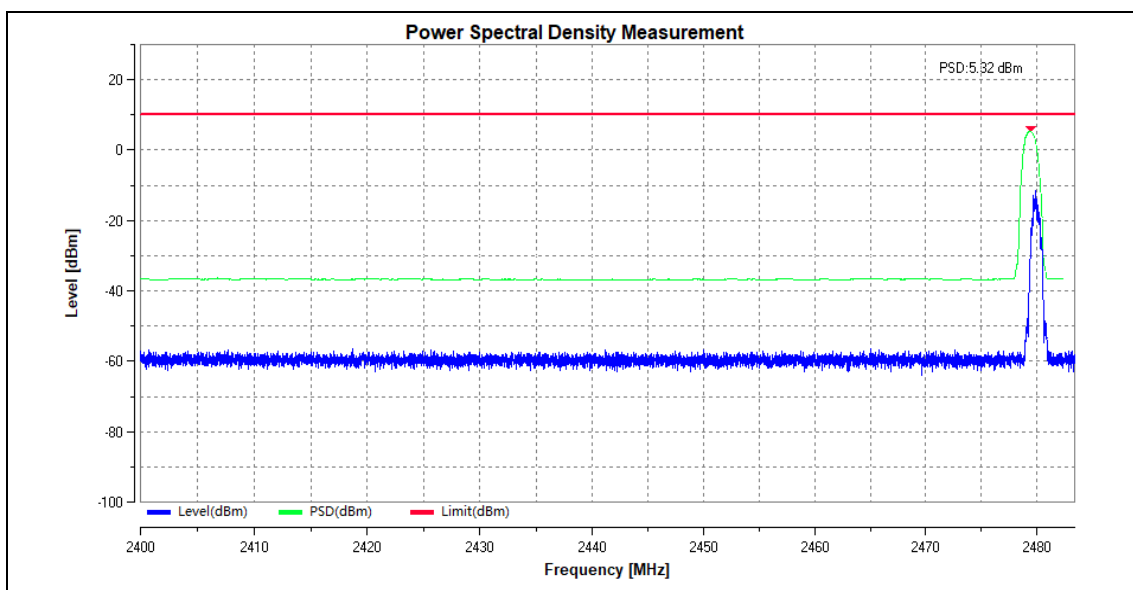
Test Result

BT LE

TestMode	Antenna	Channel	PSD[dBm/MHz]	Limit[dBm/MHz]	Verdict
BLE_BT5.0	Ant1	2402	3.87	10	PASS
		2440	5.65	10	PASS
		2480	5.32	10	PASS

Test Graphs

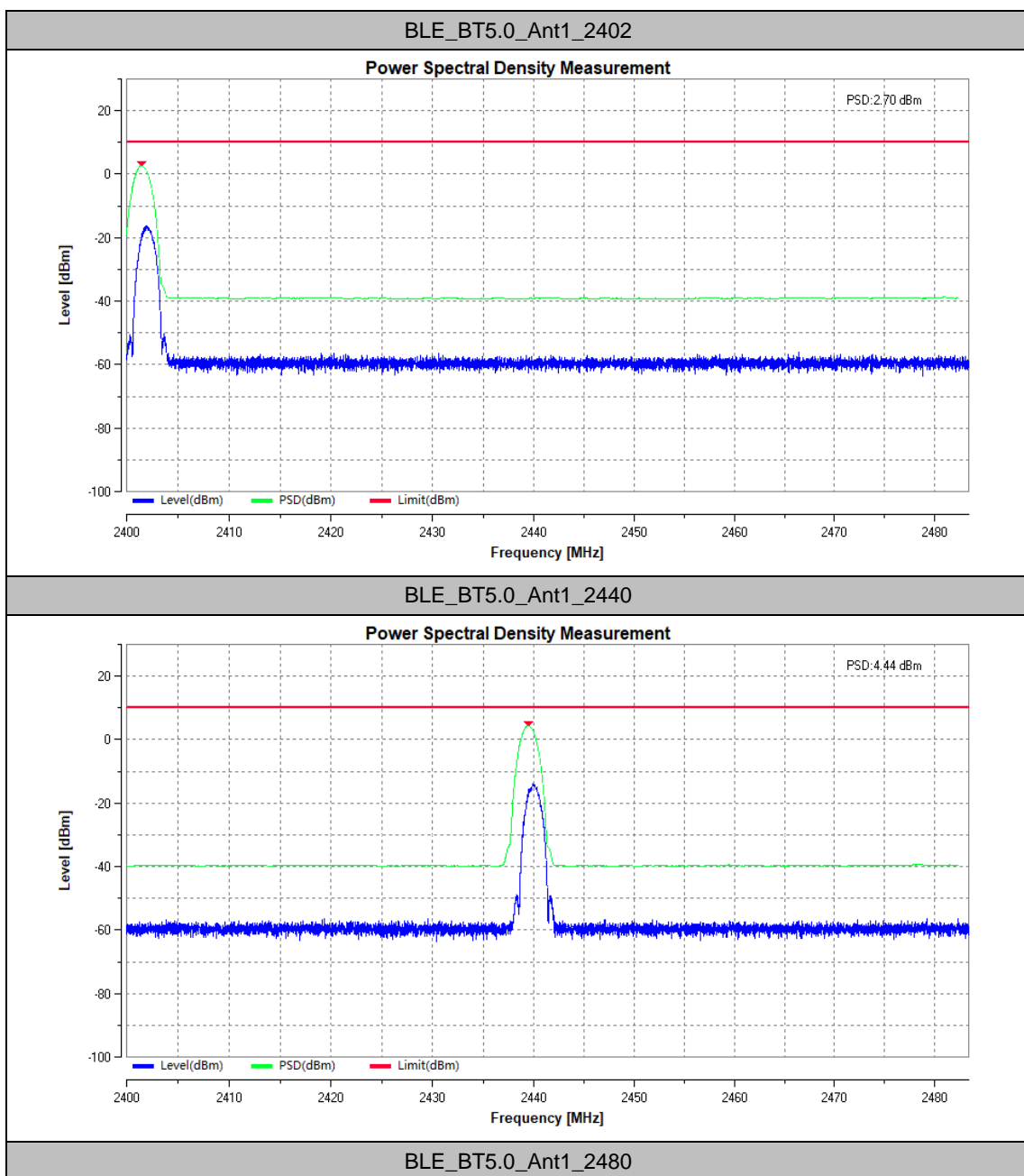


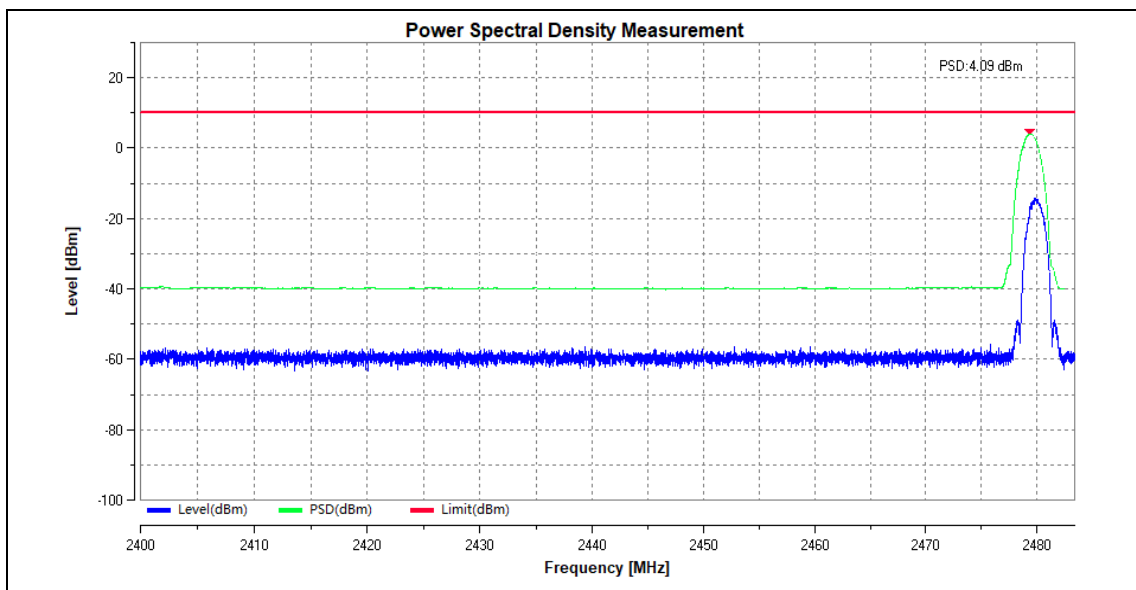


BT 2LE

TestMode	Antenna	Channel	PSD[dBm/MHz]	Limit[dBm/MHz]	Verdict
BLE_BT5.0	Ant1	2402	2.70	10	PASS
		2440	4.44	10	PASS
		2480	4.09	10	PASS

Test Graphs





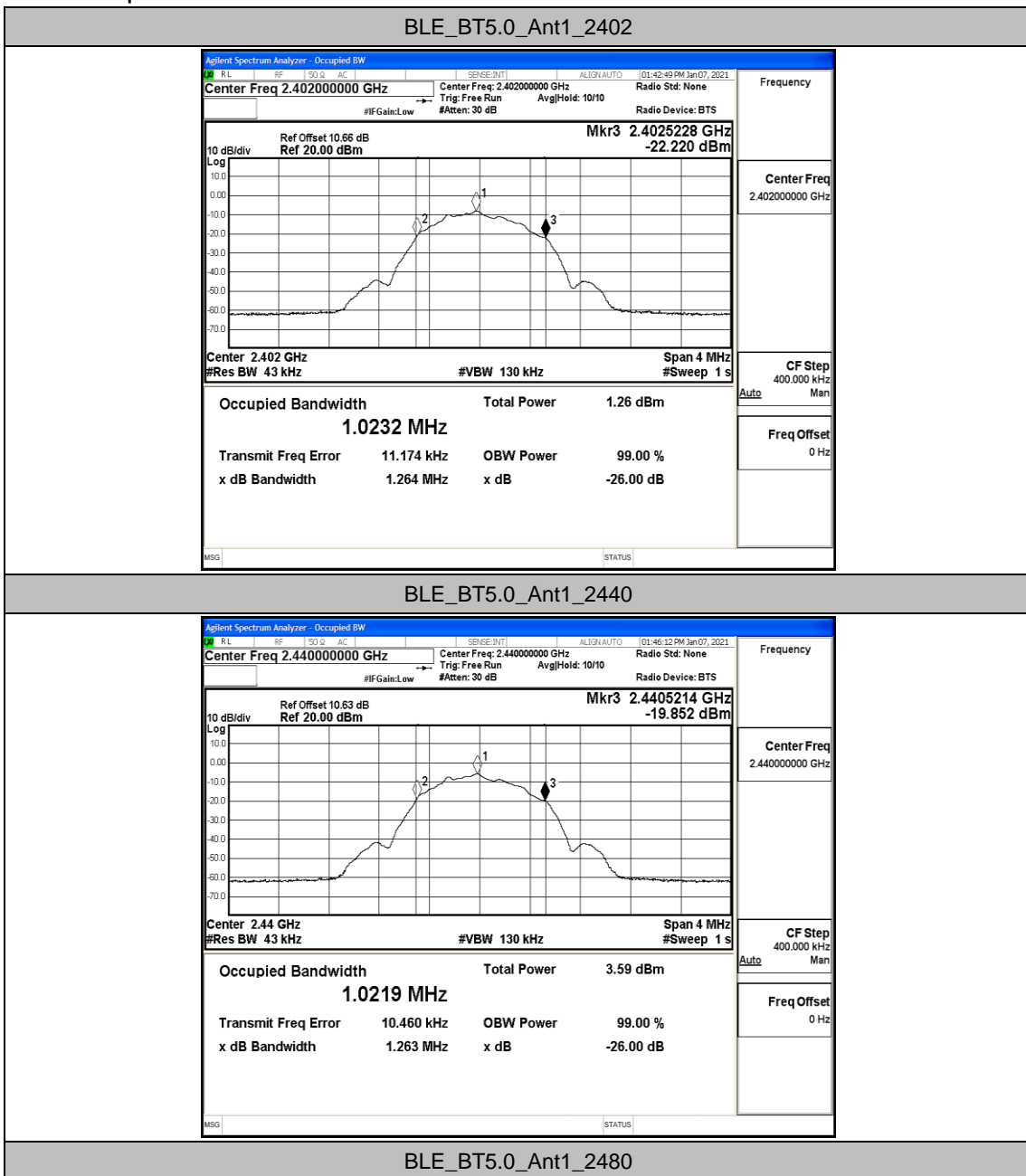
F.3 Occupied Channel Bandwidth

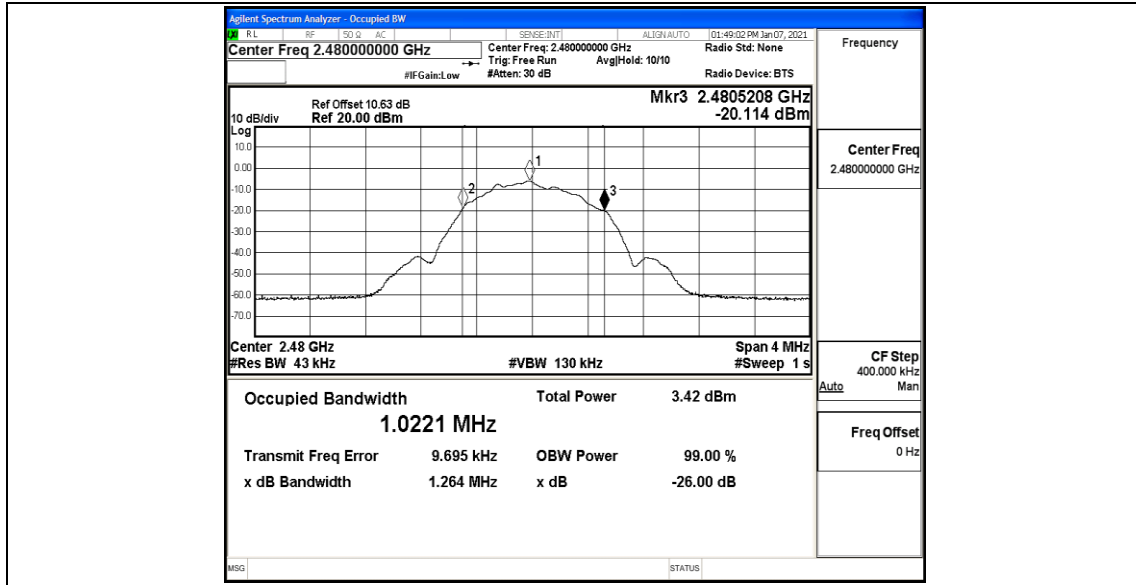
Test Result

BT LE

TestMode	Antenna	Channel	OCB[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_BT5.0	Ant1	2402	1.0232	2401.50	2402.52	2400 to 2483.5	PASS
		2440	1.0219	2439.50	2440.52	2400 to 2483.5	PASS
		2480	1.0221	2479.50	2480.52	2400 to 2483.5	PASS

Test Graphs

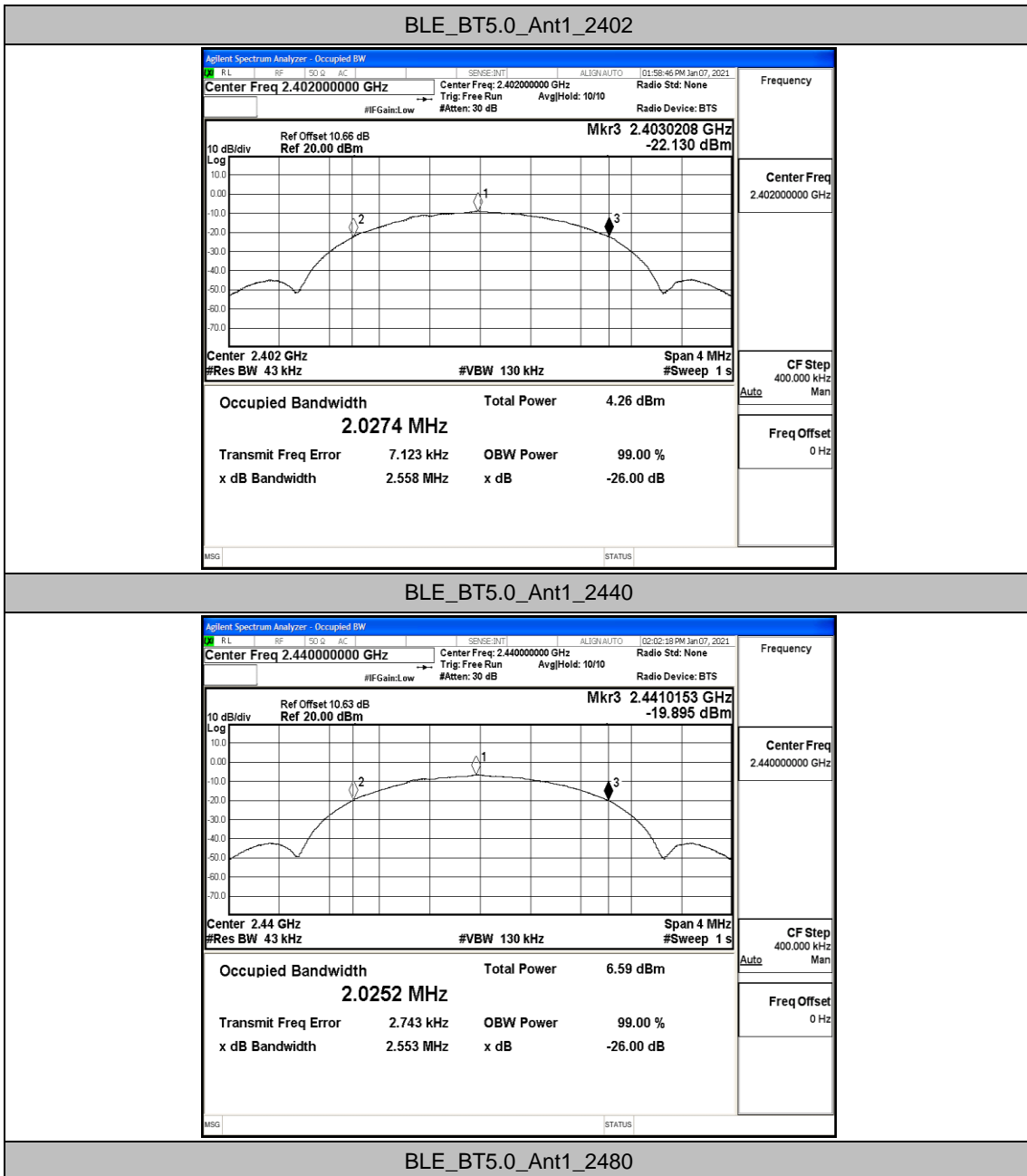


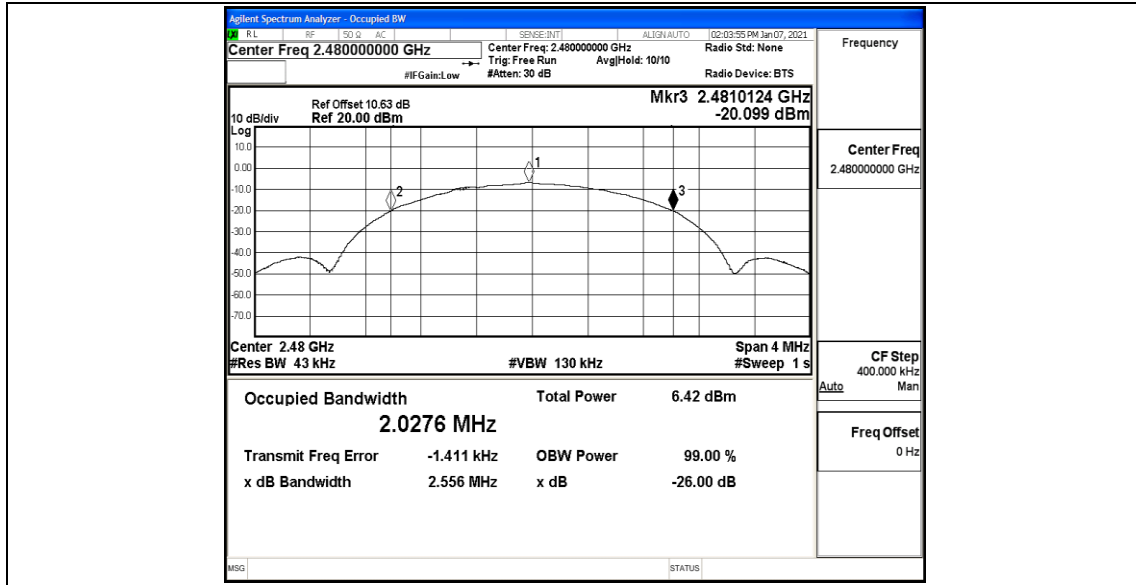


BT 2LE

TestMode	Antenna	Channel	OCB[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_BT5.0	Ant1	2402	2.0274	2400.99	2403.02	2400 to 2483.5	PASS
		2440	2.0252	2438.99	2441.02	2400 to 2483.5	PASS
		2480	2.0276	2478.98	2481.01	2400 to 2483.5	PASS

Test Graphs





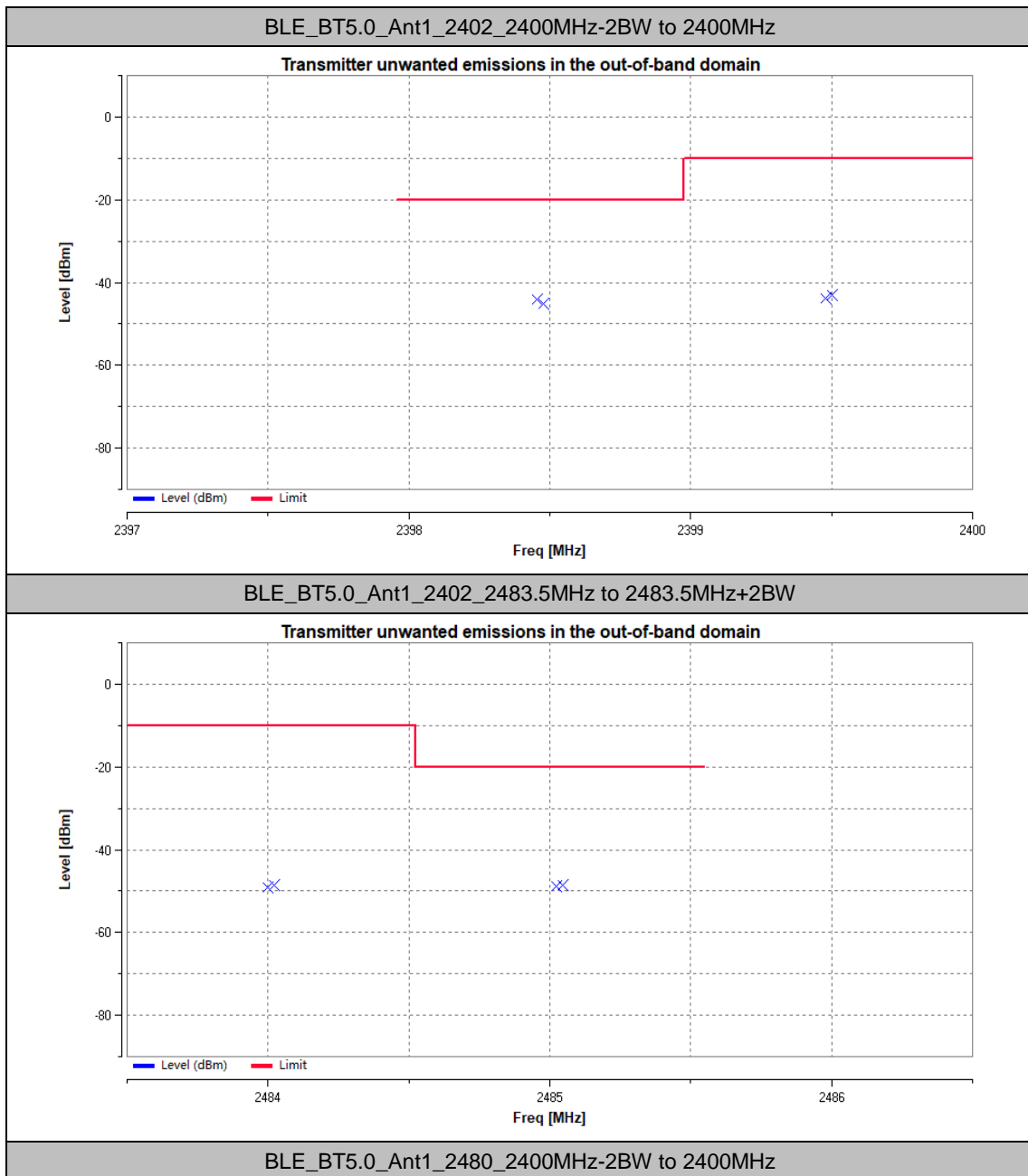
F.4 Transmitter Unwanted Emissions In The Out-Of-BandDomain

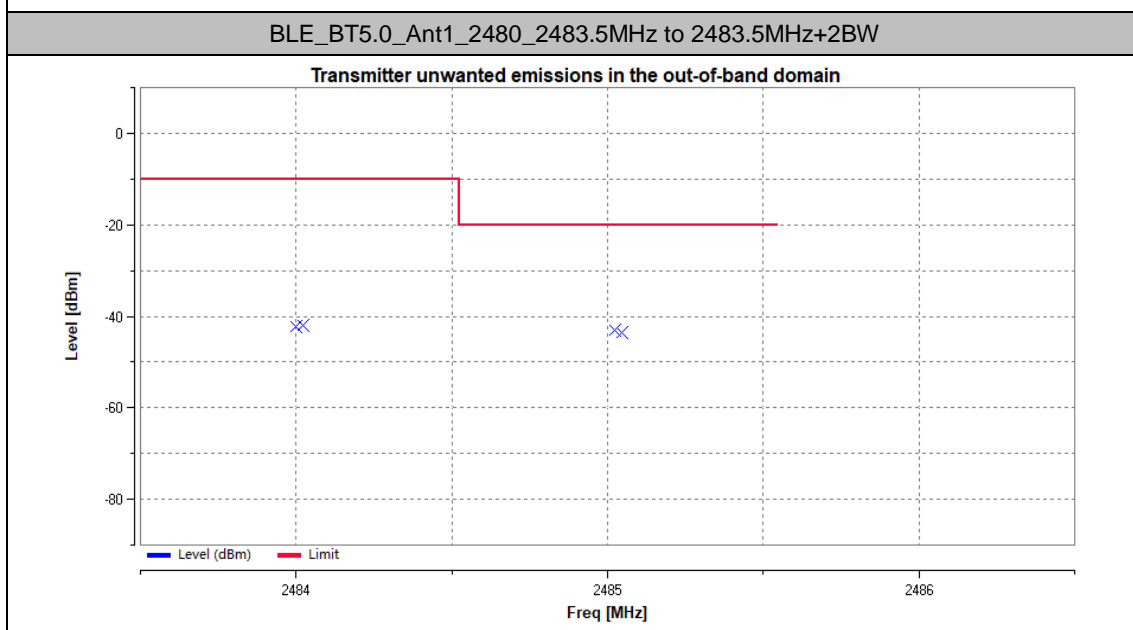
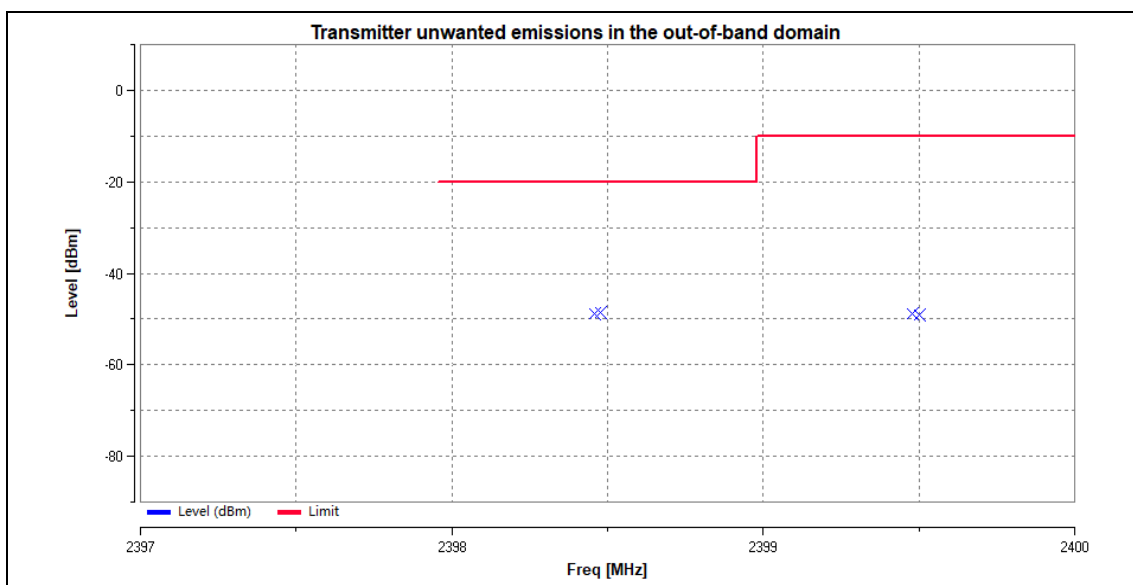
Test Result

BT LE

TestMode	Antenna	Channel	Freq. [MHz]	Level[dBm]	Limit[dBm]	Verdict
BLE_BT5.0	Ant1	2402	2398.4536	-44.22	-20.00	PASS
			2398.4768	-45.14	-20.00	PASS
			2399.4768	-43.71	-10.00	PASS
			2399.5	-43.02	-10.00	PASS
			2484	-49.01	-10.00	PASS
			2484.0232	-48.68	-10.00	PASS
			2485.0232	-48.93	-20.00	PASS
			2485.0464	-48.51	-20.00	PASS
		2480	2398.4558	-48.80	-20.00	PASS
			2398.4779	-48.66	-20.00	PASS
			2399.4779	-48.80	-10.00	PASS
			2399.5	-49.08	-10.00	PASS
			2484	-42.37	-10.00	PASS
			2484.0221	-42.08	-10.00	PASS
			2485.0221	-43.13	-20.00	PASS
			2485.0442	-43.49	-20.00	PASS

Test Graphs



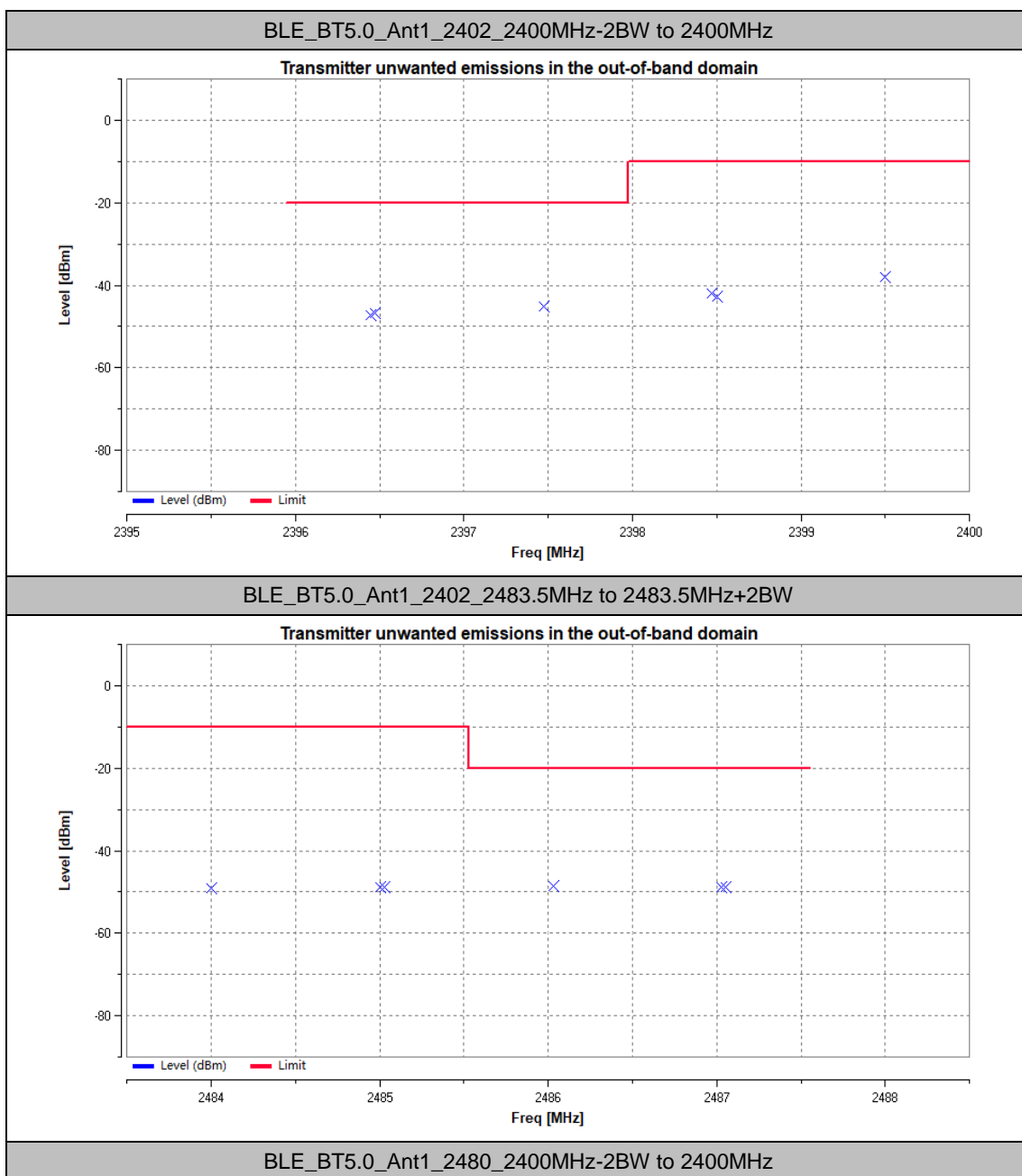


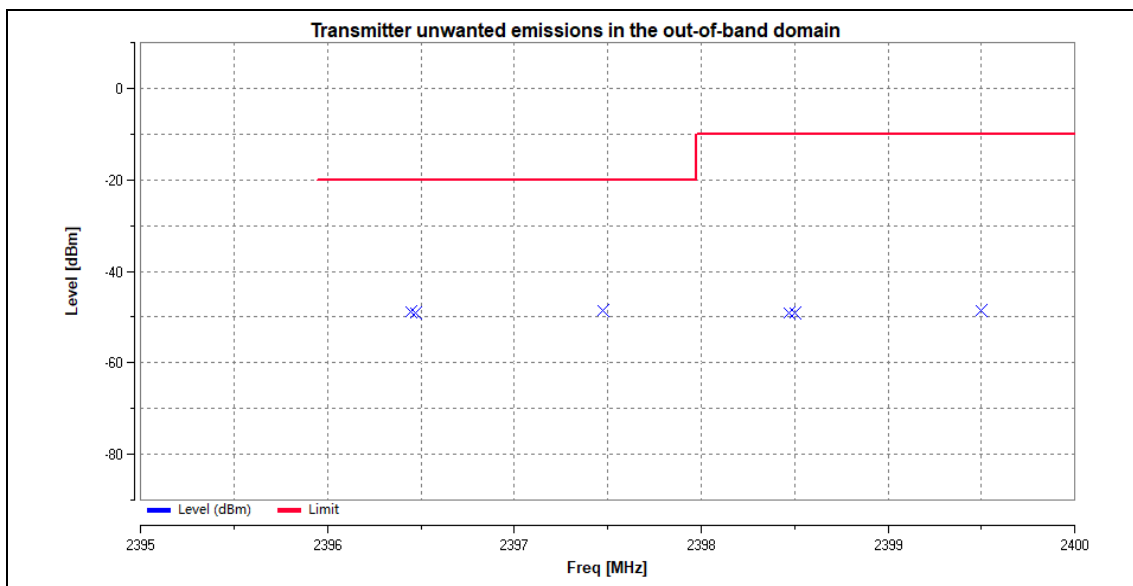
BT 2LE

TestMode	Antenna	Channel	Freq. [MHz]	Level[dBm]	Limit[dBm]	Verdict
BLE_BT5.0	Ant1	2402	2396.4452	-47.23	-20.00	PASS
			2396.4726	-46.84	-20.00	PASS
			2397.4726	-45.22	-20.00	PASS
			2398.4726	-41.87	-10.00	PASS
			2398.5	-42.71	-10.00	PASS
			2399.5	-37.92	-10.00	PASS
			2484	-49.04	-10.00	PASS
			2485	-48.91	-10.00	PASS
			2485.0274	-48.82	-10.00	PASS
			2486.0274	-48.58	-20.00	PASS

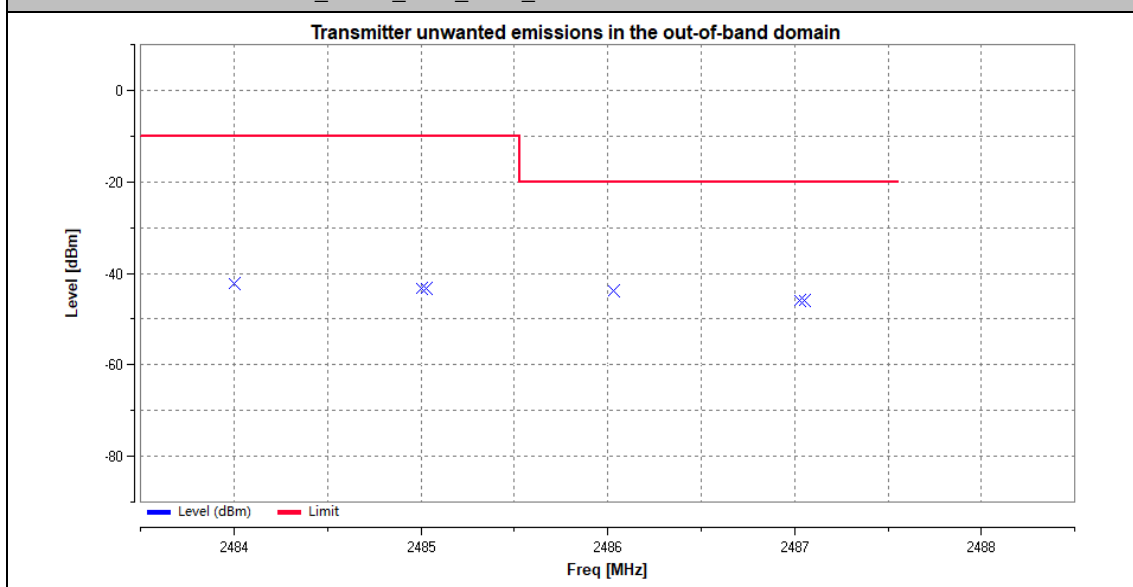
			2487.0274	-48.74	-20.00	PASS
			2487.0548	-48.83	-20.00	PASS
		2480	2396.4448	-48.83	-20.00	PASS
			2396.4724	-49.02	-20.00	PASS
			2397.4724	-48.69	-20.00	PASS
			2398.4724	-49.10	-10.00	PASS
			2398.5	-49.14	-10.00	PASS
			2399.5	-48.68	-10.00	PASS
			2484	-42.14	-10.00	PASS
			2485	-43.29	-10.00	PASS
			2485.0276	-43.23	-10.00	PASS
			2486.0276	-43.92	-20.00	PASS
			2487.0276	-46.03	-20.00	PASS
			2487.0552	-45.95	-20.00	PASS

Test Graphs





BLE_BT5.0_Ant1_2480_2483.5MHz to 2483.5MHz+2BW



F.5 Transmitter unwanted emissions in the spurious domain

Test Result-Pre-scan

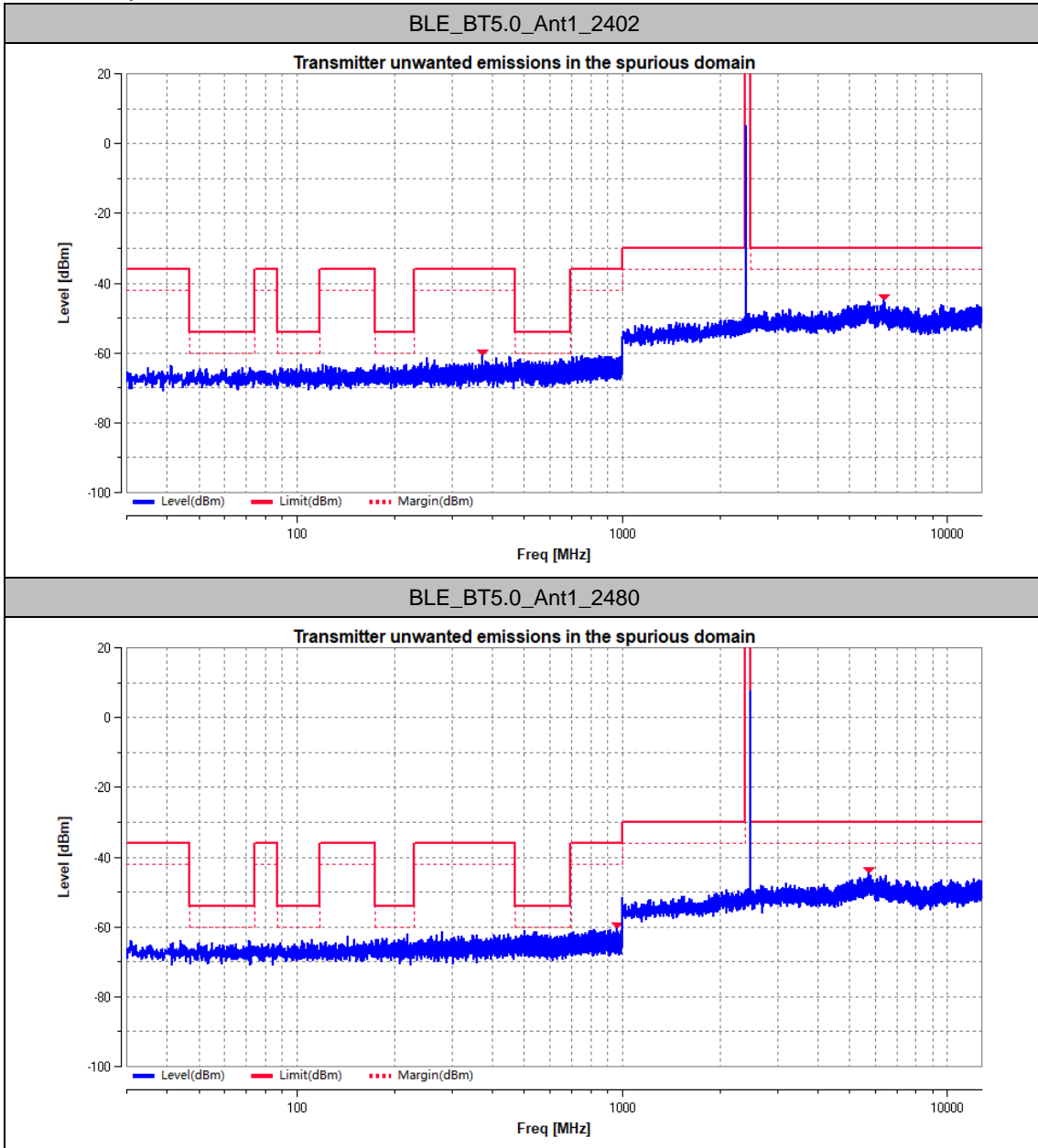
BT LE

TestMode	Antenna	Channel	Freq. [MHz]	Level[dBm]	Limit[dBm]	Verdict
BLE_BT5.0	Ant1	2402	372.77	-60.61	-36	PASS
			6397.66	-44.8	-30	PASS
		2480	962.05	-60.37	-36	PASS
			5741.13	-44.44	-30	PASS

Test Result- Emissions identified during the pre-scan

TestMode	Antenna	Channel	Freq. [MHz]	Level[dBm]	Limit[dBm]	Verdict
TestMode	Antenna	Channel	Freq	Result	Limit	Verdict

Test Graphs-Pre-scan



BT 2LE

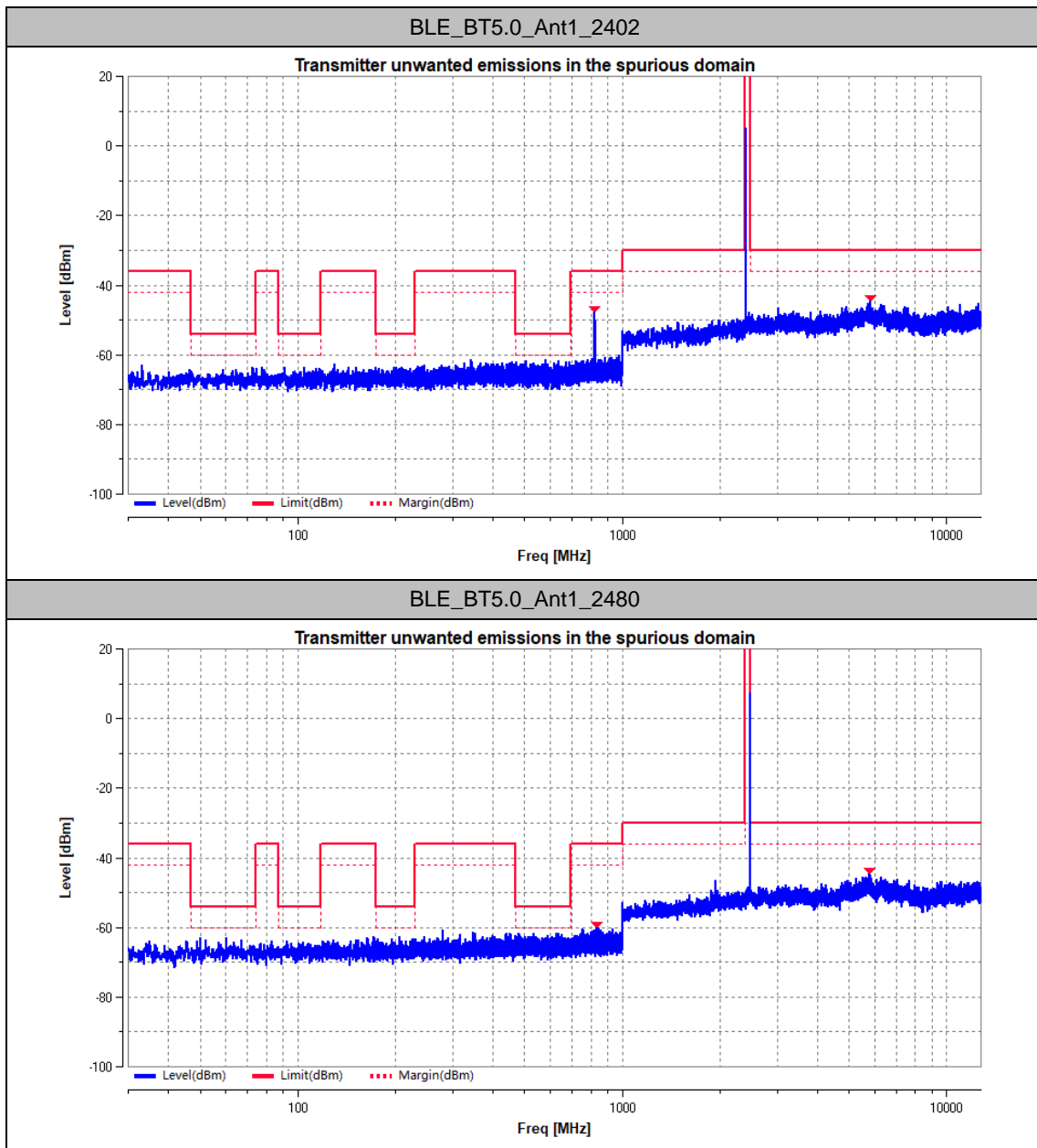
TestMode	Antenna	Channel	Freq. [MHz]	Level[dBm]	Limit[dBm]	Verdict
BLE_BT5.0	Ant1	2402	824.55	-47.62	-36	PASS
			5807.22	-44.58	-30	PASS
		2480	833.89	-59.97	-36	PASS
			5771.97	-44.74	-30	PASS

Test Result- Emissions identified during the pre-scan

TestMode	Antenna	Channel	Freq. [MHz]	Level[dBm]	Limit[dBm]	Verdict
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TestMode	Antenna	Channel	Freq	Result	Limit	Verdict
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Test Graphs-Pre-scan



F.6 Receiver spurious emissions

BT LE

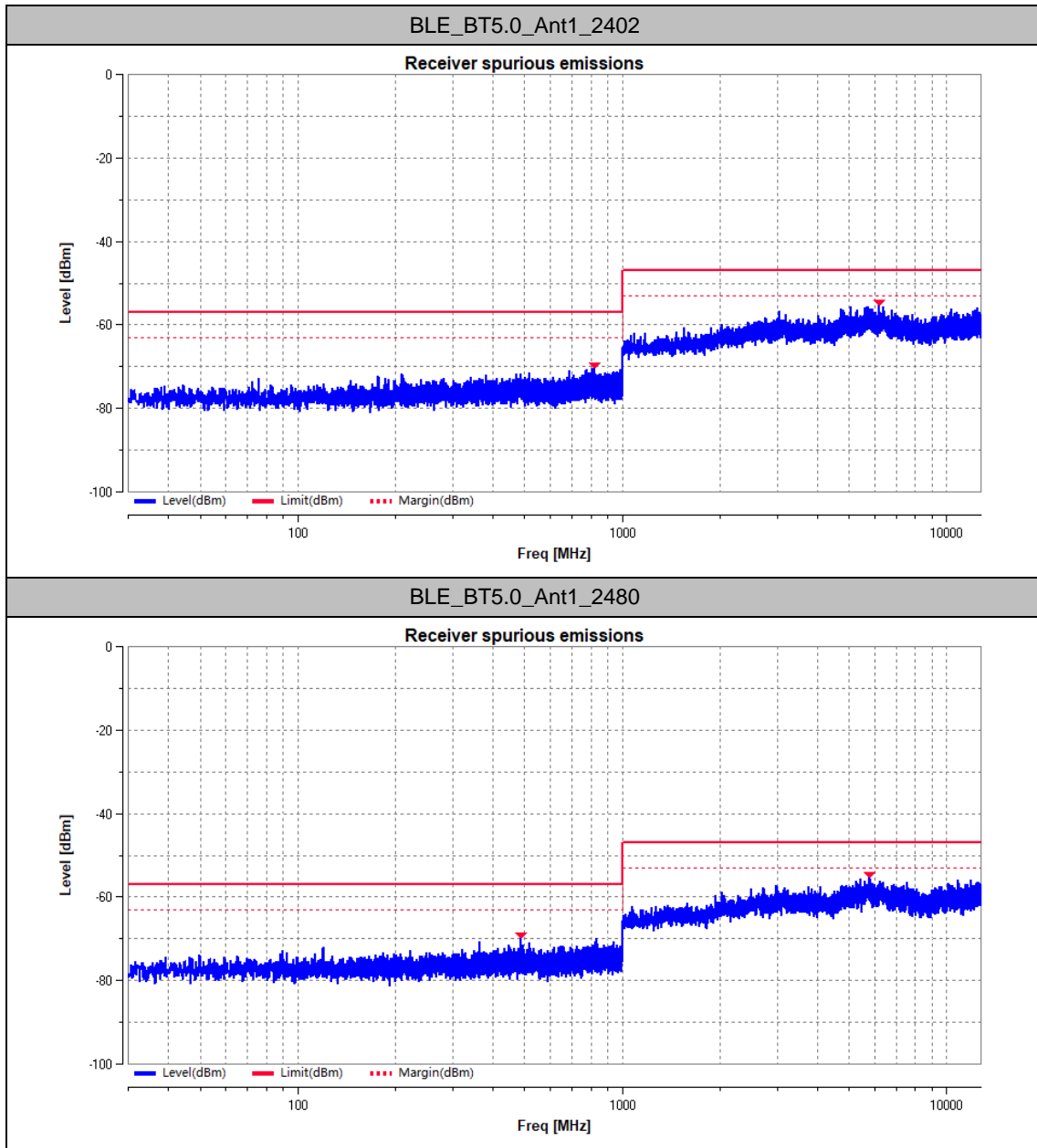
Test Result-Pre-scan

TestMode	Antenna	Channel	Freq. [MHz]	Level[dBm]	Limit[dBm]	Verdict
BLE_BT5.0	Ant1	2402	821.88	-70.47	-57.00	PASS
			6194.97	-55.45	-47.00	PASS
		2480	488.08	-69.96	-57.00	PASS
			5798.41	-55.54	-47.00	PASS

Test Result- Emissions identified during the pre-scan

TestMode	Antenna	Channel	Freq. [MHz]	Level[dBm]	Limit[dBm]	Verdict
TestMode	Antenna	Channel	Freq	Result	Limit	Verdict

Test Graphs-Pre-scan

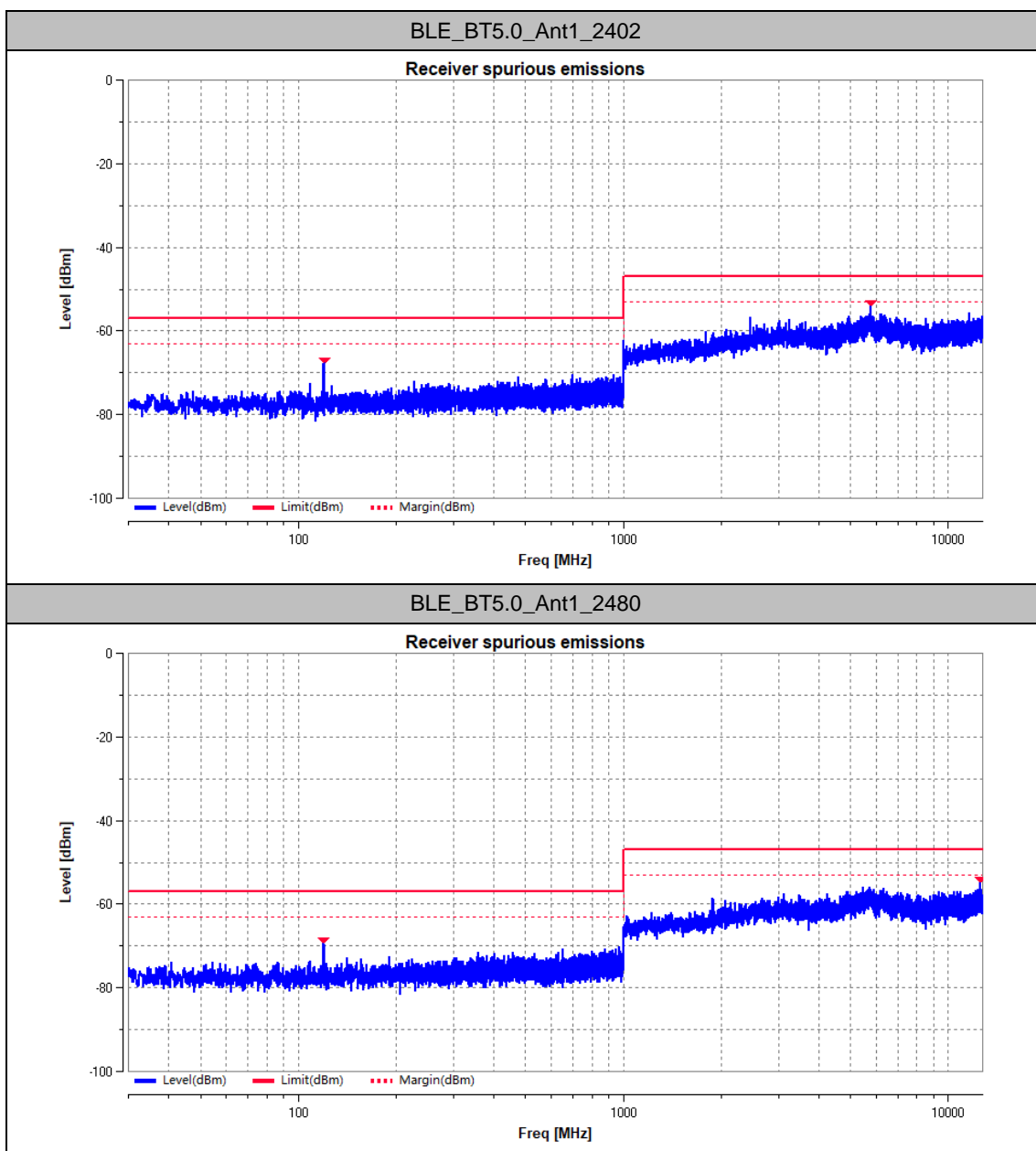


BT 2LE

Test Result-Pre-scan

TestMode	Antenna	Channel	Freq. [MHz]	Level[dBm]	Limit[dBm]	Verdict
BLE_BT5.0	Ant1	2402	120.09	-67.79	-57.00	PASS
			5777.84	-54.12	-47.00	PASS
		2480	119.97	-69.43	-57.00	PASS
			12541.44	-55	-47.00	PASS

Test Graphs-Pre-scan



F.7 Receiver Blocking

Test Result

BT LE

Test Mode	Test Channel (MHz)	Wanted Signal Mean Power from Companion Device (dBm)	Blocking Signal Frequency (MHz)	Blocking Signal Power (dBm)		Type of Blocking Signal	PER(%)		Test Result
				Test Value	Limit		Test Value	Limit	
BLE	2402	-69	2380	-29	≥ -34	CW	8.41	10	Pass
			2504	-27	≥ -34	CW	6.37	10	Pass
			2300	-23	≥ -34	CW	8.34	10	Pass
			2584	-27	≥ -34	CW	7.90	10	Pass
	2480	-69	2380	-28	≥ -34	CW	10.89	10	Pass
			2504	-26	≥ -34	CW	7.61	10	Pass
			2300	-26	≥ -34	CW	6.45	10	Pass
			2584	-23	≥ -34	CW	5.84	10	Pass

BT2 LE

Test Mode	Test Channel (MHz)	Wanted Signal Mean Power from Companion Device (dBm)	Blocking Signal Frequency (MHz)	Blocking Signal Power (dBm)		Type of Blocking Signal	PER(%)		Test Result
				Test Value	Limit		Test Value	Limit	
BLE	2402	-69	2380	-30	≥ -34	CW	7.06	10	Pass
			2504	-26	≥ -34	CW	5.85	10	Pass
			2300	-22	≥ -34	CW	8.54	10	Pass
			2584	-27	≥ -34	CW	8.70	10	Pass
	2480	-69	2380	-28	≥ -34	CW	6.98	10	Pass
			2504	-26	≥ -34	CW	8.17	10	Pass
			2300	-26	≥ -34	CW	9.49	10	Pass
			2584	-24	≥ -34	CW	9.53	10	Pass